

CLAIMS

What is claimed is:

1. A method for operating a communication system having subscriber stations (SSs) and at least one base station (BS), comprising steps of:

arranging a forward link and a reverse link to operate with a common waveform, the forward link operating at a first frequency that is transmitted by the BS and received by the SS, and the reverse link operating at a second frequency that is transmitted by the SS and received by the BS; and

using common forward link and reverse link signal processing circuitry in the BS and individual ones of the SSs.

2. A method as in claim 1, and further comprising a step of providing switching circuitry for cross-connecting RF signal paths for enabling one of said SSs to function as a BS by transmitting on the first frequency and receiving on the second frequency.

3. A method as in claim 1, wherein said common waveform enables essential parameters of the forward link and the reverse link to be the same.

4. A method as in claim 3, wherein said essential parameters comprise a modulation format.

5. A method as in claim 3, wherein said essential parameters comprise a chip rate.

6. A method as in claim 3, wherein said essential parameters comprise a symbol rate.

7. A method as in claim 3, wherein said essential parameters comprise a bit rate.

8. A method as in claim 3, wherein said essential parameters comprise a frame rate.

9. A method as in claim 3, wherein said essential parameters comprise a superframe rate.

10. A method as in claim 3, wherein said essential parameters comprise a frame structure.

11. A method as in claim 3, wherein said essential parameters comprise an error control coding scheme.
12. A method as in claim 3, wherein said essential parameters comprise synchronization words.
13. A method as in claim 3, wherein said essential parameters comprise a control field structure.
14. A communication system comprising subscriber stations (SSs) and at least one base station (BS), and further comprising circuitry for causing a forward link and a reverse link to operate with a common waveform, the forward link operating at a first frequency that is transmitted by said BS and received by said SS, and the reverse link operating at a second frequency that is transmitted by said SS and received by said BS, said circuitry comprising common forward link and reverse link signal processing circuitry in said BS and in individual ones of said SSs.
15. A communication system as in claim 14, and further comprising switching circuitry for cross-connecting RF signal paths for enabling one of said SSs to function as a BS by transmitting on the first frequency and receiving on the second frequency.
16. A communication system as in claim 14, wherein said common waveform enables essential parameters of the forward link and the reverse link to be the same.
17. A communication system as in claim 16, wherein said essential parameters comprise a modulation format.
18. A communication system as in claim 16, wherein said essential parameters comprise a chip rate.
19. A communication system as in claim 16, wherein said essential parameters comprise a symbol rate.
20. A communication system as in claim 16, wherein said essential parameters comprise a bit rate.
21. A communication system as in claim 16, wherein said essential parameters comprise a frame rate.

22. A communication system as in claim 16, wherein said essential parameters comprise a superframe rate.
23. A communication system as in claim 16, wherein said essential parameters comprise a frame structure.
24. A communication system as in claim 16, wherein said essential parameters comprise an error control coding scheme.
25. A communication system as in claim 16, wherein said essential parameters comprise synchronization words.
26. A communication system as in claim 16, wherein said essential parameters comprise a control field structure.
27. A synchronous code divisional multiple access (S-CDMA) communication system comprising subscriber stations (SSs) and at least one base station (BS), and further comprising circuitry for causing a forward link and a reverse link to operate with a common waveform, the forward link operating at a first frequency that is transmitted by said BS and received by said SS, and the reverse link operating at a second frequency that is transmitted by said SS and received by said BS, said circuitry comprising common forward link and reverse link signal processing circuitry in said BS and in individual ones of said SSs, and switching circuitry for cross-connecting RF signal paths for enabling one of said SSs to function as a BS by transmitting on the first frequency and receiving on the second frequency, wherein said SS functions as one of a point-to-multipoint pseudo-BS for at least transmitting signals to a plurality of other SSs, or as a point-to-point pseudo-BS for transmitting signals to and receiving signals from another SS.